

**Multi-Task Deep Learning Approach for Simultaneous  
Objective Response Prediction and Tumor Segmentation in HCC  
Patients with Transarterial Chemoembolization**

**Supplementary Materials**

**Note S1: CECT Imaging Protocols**

The CECT imaging were acquired using Siemens SOMATOM Sensation 64 CT, Philips Marconi MX8000, GE Discovery 750 HD, Philips Brilliance iCT, Siemens SOMATOM Force CT scanners. The detailed parameters were as follows: tube voltage, 120 kV; tube current, 100-500 mAs; rotation time, 0.5, 0.6, 0.75 second; detector collimation,  $64 \times 0.625$  or  $128 \times 0.6$ mm; field-of-view,  $360 \times 360$ mm; matrix,  $512 \times 512$ ; reconstruction thickness, 5mm. The iodinated contrast agent (Ultravist; Bayer Schering Pharma, Berlin, Germany) was injected into HCC patients with a dose of 70-100 ml and a rate of 3.0–3.5 mL/s. CECT images were acquired with arterial, portal venous and delay phase at 20–30, 50–60 and 110-120 seconds delay, respectively.